



Dart Hawkesbury
1270 Aberdeen St Hawkesbury, ON K6A 1K7 Canada
Tel (613) 632-5200

Purchasing Receipts

PO No	Supplier	Line Item No	Rel No	Terms	Purchased Item	Description	For Part No	Project	Equipment ID	Order Qty	Due Date	Received Quantity	Accounting Job No	Container No	Status	Receive Date	Price/Unit	Aging Days	Past Due	Total	Supplier Name
P0040262	MCMA001-VU	1	2%	10 Net 30	SWA3-700	Ball Bearing				400	6/26/2018	400		S084068	Stock	6/25/2018	\$ 0.11 / Ea	1		\$42.24	McMaster-Carr Supply Co.
		2			SWA6A-1900	Female Spade Terminal - 1/4"				200		200		S084069	Stock	6/25/2018	\$ 0.07 / Ea	1		\$14.40	McMaster-Carr Supply Co.
		3			M4130NR2.000	4130 Steel Round Bar 2.000" : MATERIAL: AISI 4130N ROUND BAR AS PER MIL-S-6758 OR AMS 6348/6370/6528 receive ft				6		6		S084011	Stock	6/25/2018	\$ 39.21 / ft	1		\$235.23	McMaster-Carr Supply Co.
		4			M6061T6H0.312	6061-T6 Hex Bar .312 : MATERIAL: 6061-T6/T6510/T6511/T62 ALUMINUM HEX BAR AS PER QQ-A-225/8 OR AMS-QQ-A-225/8 OR AMS4117/4128/4115/4116 OR QQ-A-200/8 OR AMS-QQ-A-200/8 OR AMS-4160 OR ASTM B211 OR ASTM B221 receive ft				12		12		S084012	Stock	6/25/2018	\$ 2.02 / ft	1		\$24.22	McMaster-Carr Supply Co.
		5			MT-O1-R0.500	Tool Steel Round Bar 0.500 dia.						12		S084013	Stock	6/25/2018	\$ 2.87 / ft	1		\$34.44	McMaster-Carr Supply Co.
		6			3896T31	Ferrule 1/16 X 3/8" - Aluminum				200		200		S084066	Stock	6/25/2018	\$ 0.13 / Ea	1		\$26.24	McMaster-Carr Supply Co.
		7			601.2045	RTV (LOCTITE 598) : RTV, Loctite 598				6		6		S084065	Stock	6/25/2018	\$ 14.36 / Ea	1		\$86.16	McMaster-Carr Supply Co.
		8			90146A059	Pin Bent-Pull Clevis Pin with Hairpin Cotter Pin 5/16" Dia. 2-1/2" Usable Length				10		10		S084067	Stock	6/25/2018	\$ 2.59 / Ea	1		\$25.90	McMaster-Carr Supply Co.
		9			90177A218	Split Ring Zinc-Plated Steel Split Ring 1" OD, 13/16" ID, 1/8" Thick				100		100		S084070	Stock	6/25/2018	\$ 0.25 / Ea	1		\$24.52	McMaster-Carr Supply Co.
		10			90281A640	Threaded Stud 3/8-16 X 4.0"				25		25		S084058	Stock	6/25/2018	\$ 1.65 / Ea	1		\$41.25	McMaster-Carr Supply Co.

PO No	Supplier	Line No	Rel No	Terms	Purchased Item	Description	For Part No	Project	Equipment ID	Order Qty	Due Date	Received Quantity	Accounting Job No	Container No	Status	Receive Date	Price/Unit	Aging Days	Past Due	Total	Supplier Name
		11			91030A031	Flange Hex Nut				20		20		S084061	Stock	6/25/2018	\$ 2.28 / Ea	1		\$45.60	McMaster-Carr Supply Co.
		12			94975A162	Quick Release Pin Quick Release Pin W/Lanyard				10		10		S084072	Stock	6/25/2018	\$ 4.49 / Ea	1		\$44.90	McMaster-Carr Supply Co.
		13			98381A508	Dowel Pin 3/16" X 3/4"				50		50		S084059	Stock	6/25/2018	\$ 0.16 / Ea	1		\$7.80	McMaster-Carr Supply Co.
		14			98470A133	Pin, Quick Release DA811-1				10		10		S084073	Inactive	6/25/2018	\$ 3.01 / pcs	1		\$30.10	McMaster-Carr Supply Co.
		15			MC1095S.020	C1095 Blue Tempered Spring Steel Sheet .020 : MCMASTER P/N: 9036K499 X 1 PK MIL-B-5687D BLUE FINISHED AND POLISHED 1095 SPRING STEEL .020 6" X 20" COIL receive sf				10		10		S084057	Stock	6/25/2018	\$ 7.61 / sf	1		\$76.08	McMaster-Carr Supply Co.
		16	2		MT-NYLON 6-B3.000X4.000-1V	CAST NYLON BAR 3" X 4" receive ft				2	6/27/2018	2		S084291	Stock	6/26/2018	\$ 94.00 / ft	0		\$188.00	McMaster-Carr Supply Co.
		17	1		6718K52	Fitting, Quick Disconnect DA182-1				10	6/26/2018	10		S084076	Inactive	6/25/2018	\$ 5.64 / pcs	1		\$56.40	McMaster-Carr Supply Co.
		18			59915K274	Rod End Bearing DA777-1				20		20		S084075	Inactive	6/25/2018	\$ 17.14 / pcs	1		\$342.80	McMaster-Carr Supply Co.
		19			92620A540	Hex Head Cap Screw Zinc Yellow-Chromate Plated Hex Head Screw				100		100		S084062	Stock	6/25/2018	\$ 0.12 / Ea	1		\$12.01	McMaster-Carr Supply Co.
		20			95229A490	Flat Washer receive pcs				100		100		S084064	Stock	6/25/2018	\$ 0.06 / pcs	1		\$6.07	McMaster-Carr Supply Co.
Total: 1,303												1,303								\$1,364.35	

Plex 6/26/2018 9:18 AM dart Tollis Andrew

200 Aurora Industrial Pkwy
Aurora OH 44202-8087
330-995-5500
cle.sales@mcmaster.com

Dart Aerospace Ltd
1270 Aberdeen St
Hawkesbury ON K6A 1K7
Canada

Purchase Order
PO040262

Order Placed By
Chantal Lavoie

McMaster-Carr Number
5264022-04

Page 1 of 2

06/20/2018

Line	Product	Ordered	Shipped
1	9529K15 Hardened 440C Stainless Steel Ball, 1/4" Diameter, Packs of 100	4 Packs	4
2	69525K16 Noninsulated Quick-Disconnect Terminals, Single-Crimp Female, 16-14 Gauge, 1/4" Wide x 0.032" Thick Tab, Packs of 100	2 Packs	2
6	3896T31 Wire Rope Compression Sleeve for 1/16" Rope Diameter - Not for Lifting, Packs of 50	4 Packs	4
7	6641A41 Flexible Gasket Maker Sealant, Loctite 598, 2.36 oz. Tube	6 Each	6
8	90146A059 Bent-Pull Clevis Pin with Hairpin Cotter Pin, Zinc-Plated Steel, 5/16" Diameter, 2-1/2" Usable Length	10 Each	10
9	90177A218 Zinc-Plated Steel Split Rings, 1" OD, 13/16" ID, 1/8" Thick, Packs of 50	2 Packs	2
10	90281A640 Setup Stud, 3/8"-16 Thread Size, 4" Long, 1-1/4" Long Threads	25 Each	25
11	91030A031 Low-Strength Steel Flange Nut, Black-Oxide, 3/8"-16 Thread Size	20 Each	20
12	94975A162 18-8 Stainless Steel Ring-Grip Quick-Release Pin with Lanyard, 1/4" Diameter, 1-5/16" Usable Length	10 Each	10
13	98381A508 Dowel Pin, Alloy Steel, 3/16" Diameter, 3/4" Long, Packs of 50	1 Pack	1
14	98470A133 Shoulder-Style Ring-Grip Quick-Release Pin, 18-8 Stainless Steel, 1/4" Diameter, 1-5/16" Usable Length	10 Each	10
15	9036K499 Wear-Resistant 1095 Spring Steel, 0.0200" Thick, 6" Wide, 20 Feet Long	1 Each	1
16	8733K243 Cast Nylon Bar, 4" Wide, 3" Thick, 2' Length	2 Feet	2
17	6718K52 303 Stainless Steel Industrial-Shape Air Hose Coupling, Plug, 1/4 Coupling Size, 1/4 NPTF Female End	10 Each	10
18	59915K274 Corrosion-Resistant Ball Joint Rod End, 3/8"-24 Thread, Right Hand	20 Each	20
19	92620A540 Zinc Yellow-Chromate Plated Hex Head Screw, Grade 8 Steel, 1/4"-20 Thread Size, 3/4" Long, Packs of 100	1 Pack	1
20	95229A490 Cadmium-Plated Steel MIL. Spec. Washer for 3/8" Screw Size, NAS 1149-F0663P, Packs of 100	1 Pack	1

Shipped separately from our New Jersey warehouse on 06/20

Packing List

200 Aurora Industrial Pkwy
Aurora OH 44202-8087
330-995-5500
cle.sales@mcmaster.com

Dart Aerospace Ltd
1270 Aberdeen St
Hawkesbury ON K6A 1K7
Canada

Purchase Order
PO040262

Order Placed By
Chantal Lavoie

McMaster-Carr Number
5264022-04

Page 2 of 2
06/20/2018

Line	Description	Ordered	Shipped
5	8893K1 Tight-Tolerance Multipurpose O1 Tool Steel Rod, 0.5000" Diameter, 6 Feet Long	2 Each	2

200 Aurora Industrial Pkwy
Aurora OH 44202-8087
330-995-5500
cle.sales@mcmaster.com

Dart Aerospace Ltd
1270 Aberdeen St
Hawkesbury ON K6A 1K7
Canada

Purchase Order
PO040262
Order Placed By
Chantal Lavoie

Page 1 of 1
06/20/2018

McMaster-Carr Number
5264022-02

Line	Product	Ordered	Shipped
3	6673T34 Easy-to-Weld 4130 Alloy Steel Rod, 2" Diameter, 6 Feet Long	1 Each	1

7" M

DAS
S

Shipped separately from our New Jersey warehouse on 06/20

5	8893K1 Tight-Tolerance Multipurpose O1 Tool Steel Rod, 0.5000" Diameter, 6 Feet Long	2 Each	2
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200 Aurora Industrial Pkwy
Aurora OH 44202-8087
330-995-5500
cle.sales@mcmaster.com

Dart Aerospace Ltd
1270 Aberdeen St
Hawkesbury ON K6A 1K7
Canada

Purchase Order
PO040262
Order Placed By
Chantal Lavoie

McMaster-Carr Number
5264022-03

Page 1 of 1
06/20/2018

Line	Product		Ordered	Shipped
4	89845K74 6061 Aluminum Hex Bar, 5/16" Wide, 6 Feet Long	DAS 9 3-89	2 Each	2

Shipped separately from our New Jersey warehouse on 06/20

5	8893K1 Tight-Tolerance Multipurpose O1 Tool Steel Rod, 0.5000" Diameter, 6 Feet Long		2 Each	2
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200 Aurora Industrial Pkwy
Aurora OH 44202-8087
330-995-5500
cle.sales@mcmaster.com

Dart Aerospace Ltd
1270 Aberdeen St
Hawkesbury ON K6A 1K7
Canada

Purchase Order
PO040262
Order Placed By
Chantal Lavoie

McMaster-Carr Number
5264022-01

Page 1 of 2

06/20/2018

Line	Product	Ordered	Shipped
5	8893K1 Tight-Tolerance Multipurpose O1 Tool Steel Rod, 0.5000" Diameter, 6 Feet Long DPS 8 3.89	2 Each	2

Shipped separately from our Cleveland warehouse on 06/20

1	9529K15 Hardened 440C Stainless Steel Ball, 1/4" Diameter	4 Packs	4
2	69525K16 Noninsulated Quick-Disconnect Terminals, Single-Crimp Female, 16-14 Gauge, 1/4" Wide x 0.032" Thick Tab	2 Packs	2
3	6673T34 Easy-to-Weld 4130 Alloy Steel Rod, 2" Diameter, 6 Feet Long	1 Each	1
4	89845K74 6061 Aluminum Hex Bar, 5/16" Wide, 6 Feet Long	2 Each	2
6	3896T31 Wire Rope Compression Sleeve for 1/16" Rope Diameter - Not for Lifting	4 Packs	4
7	6641A41 Flexible Gasket Maker Sealant, Loctite 598, 2.36 oz. Tube	6 Each	6
8	90146A059 Bent-Pull Clevis Pin with Hairpin Cotter Pin, Zinc-Plated Steel, 5/16" Diameter, 2-1/2" Usable Length	10 Each	10
9	90177A218 Zinc-Plated Steel Split Rings, 1" OD, 13/16" ID, 1/8" Thick	2 Packs	2
10	90281A640 Setup Stud, 3/8"-16 Thread Size, 4" Long, 1-1/4" Long Threads	25 Each	25
11	91030A031 Low-Strength Steel Flange Nut, Black-Oxide, 3/8"-16 Thread Size	20 Each	20
12	94975A162 18-8 Stainless Steel Ring-Grip Quick-Release Pin with Lanyard, 1/4" Diameter, 1-5/16" Usable Length	10 Each	10
13	98381A508 Dowel Pin, Alloy Steel, 3/16" Diameter, 3/4" Long	1 Pack	1

McMaster-Carr Supply Company
200 Aurora Industrial Pkwy
Aurora, OH 44202-8087 USA
Phone: 330-995-5500 Fax: 330-995-9600
E-Mail: cle.sales@mcmaster.com
Employer Identification Number (EIN): 36-1458720

Invoice: 65845254
Purchase Order: PO040262
Release:
McMaster-Carr Number: 5264022-04

ORIGINAL COMMERCIAL
INVOICE
CERTIFICATE OF ORIGIN

Ultimate Destination:
Dart Aerospace Ltd
1270 Aberdeen St
Hawkesbury ON K6A 1K7
Canada

Shipped: 20-Jun-2018
Shipper's Export Declaration (SED):
NO EEI 30.36

Intermediate Consignee:

Bill To:
Dart Aerospace Ltd
1270 Aberdeen St
Hawkesbury ON K6A 1K7
Canada

Tax Number:

Forwarding Agent:

Billing
Attention:
Shipping
Attention:
Contact:

Line	Description	Qty & Unit	Unit Price	Extension
1	9529K15 Hardened 440C Stainless Steel Ball, 1/4" Diameter, Packs of 100 Country of Origin: Peoples Republic of China Schedule B #: 848291 ECCN #: EAR99 NLR	4 PK	\$10.56	\$42.24
2	69525K16 Noninsulated Quick-Disconnect Terminals, Single-Crimp Female, 16-14 Gauge, 1/4" Wide x 0.032" Thick Tab, Packs of 100 Country of Origin: United States Schedule B #: 853690 ECCN #: EAR99 NLR	2 PK	\$7.20	\$14.40
6	3896T31 Wire Rope Compression Sleeve for 1/16" Rope Diameter - Not for Lifting, Packs of 50 Country of Origin: United States Schedule B #: 761699 ECCN #: EAR99 NLR	4 PK	\$6.56	\$26.24
7	6641A41 Flexible Gasket Maker Sealant, Loctite 598, 2.36 oz. Tube Country of Origin: United States Schedule B #: 321410 ECCN #: EAR99 NLR	6 EA	\$14.36	\$86.16
8	90146A059 Bent-Pull Clevis Pin with Hairpin Cotter Pin, Zinc-Plated Steel, 5/16" Diameter, 2-1/2" Usable Length Country of Origin: United States Schedule B #: 731829 ECCN #: EAR99 NLR	10 EA	\$2.59	\$25.90
Your order is subject only to our terms and conditions, available at www.mcmaster.com or from our Sales Department.				

Shipping Weight (in kgs): 18

Number of Packages: 1

Invoice Amounts:

Merchandise Amount: \$1,070.47
Canadian GST/HST: \$142.31
Shipping Charges: \$24.29
Total (In USD): \$1,237.07

Package Dimensions:

52 X 52 X 43 CM = .114 CUBIC M

Payment Terms: 2% discount on merchandise only if paid within 10 days, net 30 days

Authorized Signature:

Date:

20-Jun-2018

Remit payment to:

(by mail)

McMaster-Carr Supply Company
PO Box 7690
Chicago, IL 60680-7690 USA

(by wire transfer)

Bank of America
222 Broadway
New York, NY 10038
Account 86666-02021
SWIFT BOFAUS3N

Name: Sarah Weinberg

Title: Operations Mgr.

Page 1 of 3

McMaster-Carr Supply Company
200 Aurora Industrial Pkwy
Aurora, OH 44202-8087 USA
Phone: 330-995-5500 Fax: 330-995-9600
E-Mail: cle.sales@mcmaster.com
Employer Identification Number (EIN): 36-1458720

Invoice: 65845254
Purchase Order: PO040262
Release:
McMaster-Carr Number: 5264022-04

ORIGINAL COMMERCIAL
INVOICE
CERTIFICATE OF ORIGIN

Line	Description	Qty & Unit	Unit Price	Extension
20	<p>95229A490 Cadmium-Plated Steel MIL. Spec. Washer for 3/8" Screw Size, NAS 1149-F0663P, Packs of 100</p> <p>Country of Origin: United States Schedule B #: 731822 ECCN #: EAR99 NLR</p> <p>NOTE These items are controlled by the U.S. Government and authorized for export only to the country of ultimate destination for use by the ultimate consignee or end-user(s) herein identified. They may not be resold, transferred, or otherwise disposed of, to any other country or to any person other than the authorized ultimate consignee or end-user(s), either in their original form or after being incorporated into other items, without first obtaining approval from the U.S. government or as otherwise authorized by U.S. law and regulations.</p> <p>NOTE Tracking number(s) for this shipment: CPK006281051</p>	1 PK	\$6.07	\$6.07

Number of Packages: 1

Page 3 of 3

McMaster-Carr, Supply Company
200 Aurora Industrial Pkwy
Aurora, OH 44202-8087 USA
Phone: 330-995-5500 Fax: 330-995-9600
E-Mail: cle.sales@mcmaster.com
Employer Identification Number (EIN): 36-1458720

Invoice: 65845254
Purchase Order: PO040262
Release:
McMaster-Carr Number: 5264022-04

ORIGINAL COMMERCIAL
INVOICE
CERTIFICATE OF ORIGIN

Ultimate Destination:
Dart Aerospace Ltd
1270 Aberdeen St
Hawkesbury ON K6A 1K7
Canada

Shipped: 20-Jun-2018
Shipper's Export Declaration (SED):
NO EEI 30.36

Intermediate Consignee:

Bill To:
Dart Aerospace Ltd
1270 Aberdeen St
Hawkesbury ON K6A 1K7
Canada

Tax Number:

Forwarding Agent:

Billing
Attention:
Shipping
Attention:
Contact:

Line	Description	Qty & Unit	Unit Price	Extension
1	9529K15 Hardened 440C Stainless Steel Ball, 1/4" Diameter, Packs of 100 Country of Origin: Peoples Republic of China Schedule B #: 848291 ECCN #: EAR99 NLR	4 PK	\$10.56	\$42.24
2	69525K16 Noninsulated Quick-Disconnect Terminals, Single-Crimp Female, 16-14 Gauge, 1/4" Wide x 0.032" Thick Tab, Packs of 100 Country of Origin: United States Schedule B #: 853690 ECCN #: EAR99 NLR	2 PK	\$7.20	\$14.40
6	3896T31 Wire Rope Compression Sleeve for 1/16" Rope Diameter - Not for Lifting, Packs of 50 Country of Origin: United States Schedule B #: 761699 ECCN #: EAR99 NLR	4 PK	\$6.56	\$26.24
7	6641A41 Flexible Gasket Maker Sealant, Loctite 598, 2.36 oz. Tube Country of Origin: United States Schedule B #: 321410 ECCN #: EAR99 NLR	6 EA	\$14.36	\$86.16
8	90146A059 Bent-Pull Clevis Pin with Hairpin Cotter Pin, Zinc-Plated Steel, 5/16" Diameter, 2-1/2" Usable Length Country of Origin: United States Schedule B #: 731829 ECCN #: EAR99 NLR	10 EA	\$2.59	\$25.90
Your order is subject only to our terms and conditions, available at www.mcmaster.com or from our Sales Department.				

Shipping Weight (in kgs): 18

Number of Packages: 1

Invoice Amounts:

Merchandise Amount: \$1,070.47
Canadian GST/HST: \$142.31
Shipping Charges: \$24.29
Total (In USD): \$1,237.07

Payment Terms: 2% discount on merchandise only if paid within 10 days, net 30 days

Remit payment to:

(by mail)
McMaster-Carr Supply Company
PO Box 7690
Chicago, IL 60680-7690 USA

(by wire transfer)
Bank of America
222 Broadway
New York, NY 10038
Account 86666-02021
SWIFT BOFAUS3N

Authorized Signature:

Date: 20-Jun-2018

Name: Sarah Weinberg

Title: Operations Mgr.

Page 1 of 3

McMaster-Carr Supply Company
 200 Aurora Industrial Pk,
 Aurora, OH 44202-617 USA
Phone: 330-995-5500
E-Mail: cle.sales@mcmast.com
Employer Identification Number (EIN): 36-1458720

Fax: 330-995-9600

Invoice: 65845254
Purchase Order: PO040262
Release:
McMaster-Carr Number: 5264022-04

ORIGINAL COMMERCIAL
INVOICE
CERTIFICATE OF ORIGIN

Line	Description	Qty & Unit	Unit Price	Extension
9	90177A218 Zinc-Plated Steel Split Rings, 1" OD, 13/16" ID, 1/8" Thick, Packs of 50 Country of Origin: United States Schedule B #: 732620 ECCN #: EAR99 NLR	2 PK	\$12.26	\$24.52
10	90281A640 Setup Stud, 3/8"-16 Thread Size, 4" Long, 1-1/4" Long Threads Country of Origin: United States Schedule B #: 71815 ECCN #: EAR99 NLR	25 EA	\$1.65	\$41.25
11	91030A031 Low-Strength Steel Flange Nut, Black-Oxide, 3/8"-16 Thread Size Country of Origin: United States Schedule B #: 731816 ECCN #: EAR99 NLR	20 EA	\$2.28	\$45.60
12	94975A162 18-8 Stainless Steel Ring-Grip Quick-Release Pin with Lanyard, 1/4" Diameter, 1-5/16" Usable Length Country of Origin: United States Schedule B #: 731829 ECCN #: EAR99 NLR	10 EA	\$4.49	\$44.90
13	98381A508 Dowel Pin, Alloy Steel, 3/16" Diameter, 3/4" Long, Packs of 50 Country of Origin: United States Schedule B #: 731829 ECCN #: EAR99 NLR	1 PK	\$7.80	\$7.80
14	98470A133 Shoulder-Style Ring-Grip Quick-Release Pin, 18-8 Stainless Steel, 1/4" Diameter, 1-5/16" Usable Length Country of Origin: United States Schedule B #: 731829 ECCN #: EAR99 NLR	10 EA	\$3.01	\$30.10
15	9036K499 Wear-Resistant 1095 Spring Steel, 0.0200" Thick, 6" Wide, 20 Feet Long Country of Origin: Taiwan Schedule B #: 722692 ECCN #: EAR99 NLR	1 EA	\$76.08	\$76.08
16	8733K243 Cast Nylon Bar, 4" Wide, 3" Thick, 2' Length Country of Origin: United States Schedule B #: 392092 ECCN #: EAR99 NLR	2 FT	\$94.00	\$188.00
17	6718K52 303 Stainless Steel Industrial-Shape Air Hose Coupling, Plug, 1/4 Coupling Size, 1/4 NPTF Female End Country of Origin: United States Schedule B #: 848190 ECCN #: 2B999 NLR	10 EA	\$5.64	\$56.40
18	59915K274 Corrosion-Resistant Ball Joint Rod End, 3/8"-24 Thread, Right Hand Country of Origin: United States Schedule B #: 848330 ECCN #: EAR99 NLR	20 EA	\$17.14	\$342.80
19	92620A540 Zinc Yellow-Chromate Plated Hex Head Screw, Grade 8 Steel, 1/4"-20 Thread Size, 3/4" Long, Packs of 100 Country of Origin: Canada Schedule B #: 731815 ECCN #: EAR99 NLR	1 PK	\$12.01	\$12.01

Number of Packages: 1

Page 2 of 3

McMaster-Carr Supply Company
 200 Aurora Industrial Pkwy
 Aurora, OH 44202-8087
 Phone: 330-995-5500 Fax: 330-995-9600
 E-Mail: cle.sales@mcmaster.cc
 Employer Identification Number: 36-1458720

Invoice: 65845254
 Purchase Order: PO040262
 Release:
 McMaster-Carr Number: 5264022-04

ORIGINAL COMMERCIAL
INVOICE
 CERTIFICATE OF ORIGIN

Line	Description	Qty & Unit	Unit Price	Extension
20	35229A490 Cadmium-Plated Steel MIL. Spec. Washer for 3/8" Screw Size, NAS 1149-F0663 Packs of 100 Country of Origin: United States Schedule B #: 1822 ECCN #: EAR99 NLR NOTE These items are controlled by the U.S. Government and authorized for export only to the country of ultimate destination for use by the ultimate consignee or end-user(s) herein identified. They may not be resold, transferred, or otherwise disposed of, to any other country or to any person other than the authorized ultimate consignee or end-user(s), either in their original form or after being incorporated into other items, without first obtaining approval from the U.S. Government or as otherwise authorized by U.S. law and regulations. NOTE Tracking number(s) for this shipment: CPK00281051	1 PK	\$6.07	\$6.07

Number of Packages: 1

Page 3 of 3



Dart Aerospace Ltd.
1270 Aberdeen St
Hawkesbury, ON
K6A 1K7
Canada

Tel (613) 632-5200

PURCHASE ORDER

PO040262

Supplier: MCM001-VU
McMaster-Carr Supply Co,
P.O. Box 7690
Chicago, IL 60680-7690 USA
Phone: 330 995 5500
Fax: 330 995 9600

PO No: PO040262

PO Date: 6/20/18

Due Date: 6/22/18

Purchase Order

Revision:

Revision Date:

Ship-To Contact: Lavoie, Chantal
Phone: clavoie@dartaero.com

E-MAILED
JUN 20 2018

Ship To: 1270 Aberdeen Street
Hawkesbury
ON
K6A 1K7 Canada
Phone: 613-632-5200

Via: Ground

Pynt Terms: 2% 10 Net 30

Freight Terms:

Special Comments:

Items

Line Item	Job	Part	Supplier Part No	Description	Status	Due Date	Order Quantity	Received Quantity	Balance	Unit Price (USD)	Extended Price
1		SWA3-700	9529K15 100/per pk	Ball Bearing	Firmed	6/22/18	400 Ea	0 Ea	400 Ea	\$0.1056/Ea	\$42.24
2		SWA6A-1900	69525K16 100 pcs per pk	Female Spade Terminal - 1/4"	Firmed	6/22/18	200 Ea	0 Ea	200 Ea	\$0.072/Ea	\$14.40
3		M4130NR2.000 <i>AT</i>	6673T34 6 FT	4130 Steel Round Bar 2.000" : MATERIAL: AISI 4130N ROUND BAR AS PER MIL-S-6758 OR AMS 6348/6370/6528 receive ft	Firmed	6/22/18	6 ft	0 ft	6 ft	\$39.205/ft	\$235.23
4		M6061T6H0.312 <i>AT</i>	89845K74 6 FT	6061-T6 Hex Bar .312 : MATERIAL:6061- T6/T651/T6510/T6511/T62 ALUMINUM HEX BAR AS PER QQ-A-225/8 OR AMS-QQ-A-225/8 OR AMS4117/4128/4115/4116 OR QQ-A-200/8 OR AMS- QQ-A-200/8 OR AMS 4160 OR ASTM B211 OR ASTM B221 receive ft	Firmed	6/22/18	12 ft	0 ft	12 ft	\$2.018333/ft	\$24.22
5		MT-O1-R0.500 <i>AT</i>	8893K1 6 FT	Tool Steel Round Bar 0.500 dia.	Firmed	6/22/18	12 ft	0 ft	12 ft	\$2.87/ft	\$34.44
6		3896T31	50/pk	Ferule 1/16 X 3/8" - Aluminum	Firmed	6/22/18	200 Ea	0 Ea	200 Ea	\$0.1312/Ea	\$26.24
7		601.2045	6641A41	RTV (LOCTITE 598) : RTV, Loctite 598	Firmed	6/22/18	6 Ea	0 Ea	6 Ea	\$14.36/Ea	\$86.16

Plex 6/20/18 3:19 PM dart.lavoie.chantal

Items												
Line Item	Job	Part	Supplier Part No	Description	Status	Due Date	Order Quantity	Received Quantity	Balance	Unit Price (USD)	Extended Price	
8		90146A059	1/pk	Pin Bent-Pull Clevis Pin with Hairpin Cotter Pin 5/16" Dia, 2-1/2" Usable Length	Firmed	6/22/18	10 Ea	0 Ea	10 Ea	\$2.59/Ea	\$25.90	
9		90177A218	50/pk	Split Ring Zinc-Plated Steel Split Ring 1" OD, 13/16" ID, 1/8" Thick	Firmed	6/22/18	100 Ea	0 Ea	100 Ea	\$0.2452/Ea	\$24.52	
10		90281A640	1/pk	Threaded Stud 3/8-16 X 4.0"	Firmed	6/22/18	25 Ea	0 Ea	25 Ea	\$1.65/Ea	\$41.25	
11		91030A031	1/pk	Flange Hex Nut	Firmed	6/22/18	20 Ea	0 Ea	20 Ea	\$2.28/Ea	\$45.60	
12		94975A162	1/pk	Quick Release Pin Quick Release Pin W/Lanyard	Firmed	6/22/18	10 Ea	0 Ea	10 Ea	\$4.49/Ea	\$44.90	
13		98381A508	50/pk	Dowel Pin 3/16" X 3/4"	Firmed	6/22/18	50 Ea	0 Ea	50 Ea	\$0.156/Ea	\$7.80	
14	179549	98470A133		Pin, Quick Release D4811-1	Firmed	6/22/18	10 pcs	0 pcs	10 pcs	\$3.01/pcs	\$30.10	
15		MC1095S.020	9036K499	C1095 Blue Tempered Spring Steel Sheet .020 : MCMaster P/N: 9036K499 X 1 PK MIL-B-5687D BLUE FINISHED AND POLISHED 1095 SPRING STEEL .020 6" X 20' COIL receive sf	Firmed	6/22/18	10 sf	0 sf	10 sf	\$7.6075/sf	\$76.08	
Line Item Note 1 roll of 6" x 20 ft = 10 sf												
16		MT-NYLON 6-B3.000X4.000-W	8733K243	CAST NYLON BAR 3" X 4" receive ft	Firmed	6/22/18	2 ft	0 ft	2 ft	\$94.00/ft	\$188.00	
17	179554	6718K52		Fitting, Quick Disconnect D4182-1	Firmed	6/22/18	10 pcs	0 pcs	10 pcs	\$5.64/pcs	\$56.40	
18	179548	59915K274		Rod End Bearing D4777-1	Firmed	6/22/18	20 pcs	0 pcs	20 pcs	\$17.14/pcs	\$342.80	
19		92620A540	100/pk	Hex Head Cap Screw Zinc Yellow-Chromate Plated Hex Head Screw	Firmed	6/22/18	100 Ea	0 Ea	100 Ea	\$0.1201/Ea	\$12.01	
20		95229A490	100/pk	Flat Washer receive pcs	Firmed	6/22/18	100 pcs	0 pcs	100 pcs	\$0.0607/pcs	\$6.07	
Grand Total:											\$1,364.35	

Order Notes

Order Notes

Procurement Quality Clauses

A005 RIGHT OF ENTRY

A016 PERSONNEL QUALIFICATION

A026 CERTIFICATION OF MATERIAL CONFORMANCE

A032 DOCUMENT SPECIAL REQUIREMENTS

A033 STATEMENT OF CONFORMITY/TEST RECORDS FOR NAS, AN and MS FASTENERS

A040 NOTIFICATION OF QUALITY ESCAPE

A041 QUALITY MANAGEMENT SYSTEM

A042 DART NOTIFICATION BY SUPPLIER

A043 RETENTION OF QUALITY DOCUMENTS

A048 COUNTERFEIT PARTS AVOIDANCE, DETECTION, MITIGATION AND DISPOSITION PROGRAM

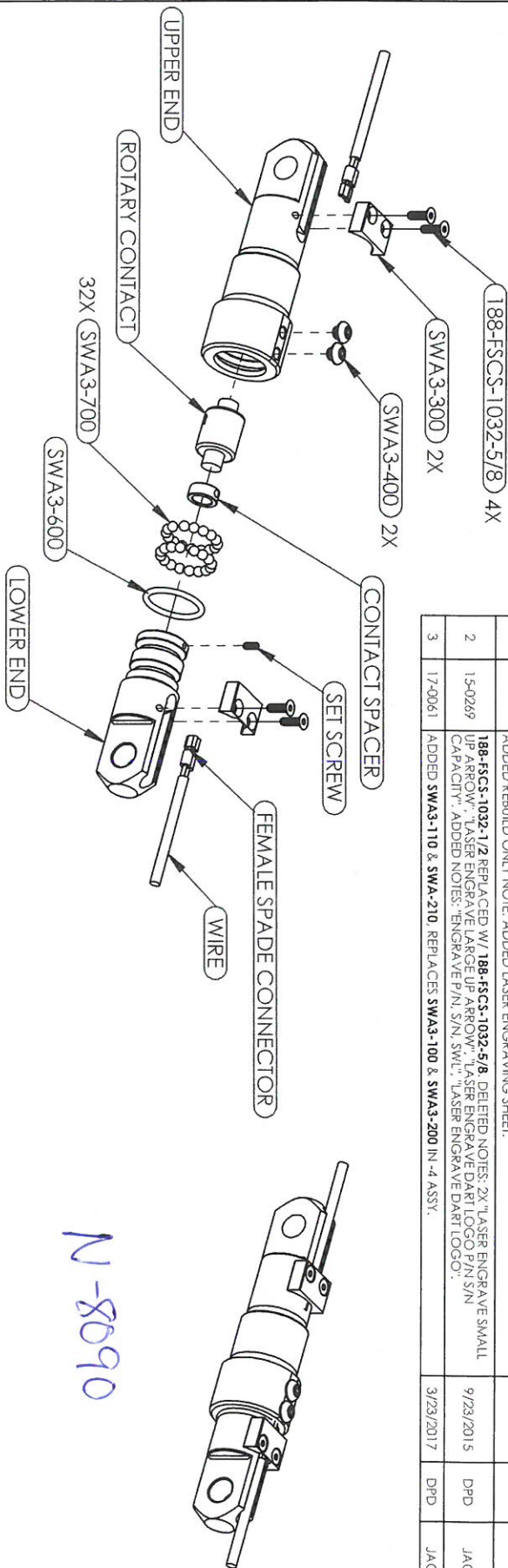
A049 SUPPLIER AWARENESS



Terms & Condition of Purchasing(Suppliers) and Procurement Quality Clauses are an integral part of our AS9100 requirements. To learn in detail, please visit www.dartaerospace.com for further explanation.

Plex 6/20/18 3:19 PM dart.lavoie.chantal

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REVISIONS			
REV	ECR	DESCRIPTION	
A		REPLACED ID DECAL 600.1318 WITH LASER ETCHING	
B		REMOVED 2 WIRE HARNESS	
1	15-0079	UPDATED TO NEW DRAFTING STANDARDS. ADDED SWA6A-2000, 188-FPS-832-3/8, EL314-S10W CHD QTY'S: -2 ASSY WAS 6 IS 1, -3 ASSY WAS 6 IS 1, ADDED 6 FT. TO B/O INFO. EL404-ARTIC CHD QTY'S: -4 ASSY WAS 6 IS 1, ADDED 6 FT. TO B/O INFO. SWA6A-1900 CHD QTY'S: -4 ASSY WAS 6 IS 4. ADDED REBUILD ONLY NOTE. ADDED LASER ENGRAVING SHEET.	
2	15-0269	188-FSCS-1032-1/2 REPLACED W/ 188-FSCS-1032-5/8. DELETED NOTES: 2X "LASER ENGRAVE SMALL CAPACITY", "LASER ENGRAVE DART LOGO P/N S/N", "LASER ENGRAVE DART LOGO".	
3	17-0061	ADDED SWA3-110 & SWA-210. REPLACES SWA3-100 & SWA3-200 IN -4 ASSY.	

-2 QTY	-3 QTY	-4 QTY	B/O	Part #	Description	Material	B/O INFORMATION OR SPECIFICATIONS	Pg.
1	1	-	-	SWA3-100	UPPER END			1
-	-	1	-	SWA3-110	UPPER END			1
1	1	-	-	SWA3-200	LOWER END			1
-	-	1	-	SWA3-210	LOWER END			1
2	2	2	-	SWA3-300	WIRE CLAMP			1
2	2	2	-	SWA3-400	BUTTON HEAD SCREW			1
1	-	-	-	SWA3-500	CONTACT SPACER			1
-	-	-	-	SWA3-500B	CONTACT SPACER			1
1	1	1	-	SWA3-600	O-RING			1
32	32	32	B/O	SWA3-700	BALL BEARING	S.S.	Ø1/4 MCMMASTER-CARR #9229K15 X200	1
1	-	-	B/O	SWA6A-900A	ROTARY CONTACT		MERCOTIAC #230	1
-	1	-	B/O	SWA6A-900B	ROTARY CONTACT		MERCOTIAC #330	1
-	-	1	B/O	SWA6A-900C	ROTARY CONTACT		MERCOTIAC #430	1
4	4	4	B/O	188-FSCS-1032-5/8	FLAT SOCKET CAP SCREW	S.S.	10-32 x 5/8 (MCMMASTER-CARR #92210A.303)	1
1	1	-	B/O	EL314-S10W	3 WIRE		6 FT. (TEXCAN #EL314-S10W 3/14)	1
-	-	1	B/O	EL414-ARTIC	4 WIRE		6 FT. (TRUCK & AUTO SUPPLY #EL414-ARTIC 4/14)	1
-	1	1	B/O	188-FPS-832-1/4	SET SCREW	18-8 S.S.	8-32 x 1/4 MCMMASTER-CARR #92311A190	1
1	-	-	B/O	188-FPS-832-3/8	SET SCREW	S.S.	8/32 x 3/8 (MCMMASTER-CARR #92311A192)	1
-	4	4	B/O	SWA6A-1900	1/4" FEMALE SPADE CONNECTOR		(MCMMASTER-CARR #69525K16) X200	1
-	-	4	B/O	SWA6A-2000	1/8" FEMALE SPADE CONNECTOR		(MCMMASTER-CARR #69525K14)	1
1	1	1	B/O	600.1319	UP DECAL		(MCMMASTER-CARR #92311A192)	1
1	1	1	B/O	EL-PLUG-F	FEMALE PLUG		(MCMMASTER-CARR #7216K6)	1
-	1	1	B/O	EL-PLUG-M	MALE PLUG		(MCMMASTER-CARR #7216K5)	1

NOTES:
1. ALL ASSEMBLY TO BE DONE IN ACCORDANCE WITH SWA3 SWIVEL MANUAL.
2. FOR CUSTOMER REBUILD ONLY.

DART
AEROSPACE

SWA3 SWIVEL

SWA3

REV 3

UNLESS OTHERWISE SPECIFIED

DIMENSIONS ARE IN INCHES

XXX ± .005 FOR CUTTING

XX ± .01 SURFACES = 125/

X ± .1 BREA K ALL SHARP EDGES

1. DIMENSIONAL LIMITS APPLY

2. AFTER PLATING

3. INTERPRET DIM AND TOL PER

ASME Y14.5M-2009

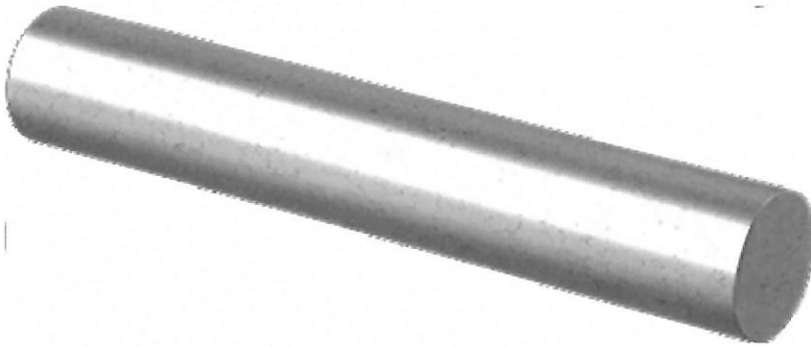
USED ON MODEL

APPROVED: JAG 04/11/2017

SCALE 1:4 DATE SHEET 1 OF 2

Easy-to-Weld 4130 Alloy Steel Rod 2" Diameter

\$235.23 Each
6673T34



Material	4130 Alloy Steel
Cross Section Shape	Round
Construction	Solid
Appearance	Plain
Diameter	2"
Diameter Tolerance	-0.006" to 0"
Tolerance Rating	Undersized
Yield Strength	Not Rated
Fabrication	Cold Worked, Normalized
Temper Rating	Not Rated
Hardness	Rockwell C20
Hardness Rating	Hard
Heat Treatable	Yes
Maximum Hardness after Heat Treatment	Rockwell C54
Mechanical Finish	Turned and Polished
Temperature Range	Not Rated
Specifications Met	AMS 2301, AMS 6348, ASTM A108
Straightness Tolerance	Not Rated
Density	0.28 lbs./cu. in.
Surface Resistivity	22.3 microhm-cm @ 68° F
Coefficient of Thermal Expansion	7.6×10^{-6}
Elongation	26.5%
Material Composition	
Aluminum	0.039%
Iron	94.53-98.23%
Carbon	0.27-0.34%
Chromium	0.80-1.15%
Copper	0-0.25%
Hydrogen	0-2 ppm Max.
Manganese	0.35-0.60%
Molybdenum	0.15-0.25%

Nickel	0-0.25%
Niobium	0.05% Max.
Phosphorus	0.011-0.035%
Silicon	0.15-0.40%
Sulfur	0.002-0.04%
Titanium	0.03% Max.
Vanadium	0-0.035%
<hr/>	
Length Tolerance	-6" to 6"
<hr/>	
Length	6 ft.
<hr/>	
RoHS	Not Compliant

4130 alloy steel has a low carbon content for good weldability. It's often used for gears, fasteners, and structural applications. These rods have been normalized for consistent hardening and machining.



DESIGN #	DRAWN BY #	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
CHECKED UP	APPROVED #	DRAWING NO. M4130N-R	REV. A SHEET 1 OF 1
DATE 02.04.19		TITLE 4130 ROUND BAR	SCALE NTS
A	02.04.19	NEW ISSUE	

PURCHASE MATERIAL: AISI 4130N ROUND BAR
PER MIL-5-675B OR AMS 6348/6370/6528

PART NUMBER: M4130N-R/D.DDD | WHERE D.DDD = DIAMETER IN INCHES
DIA
EG. 7/8" ROUND BAR = M4130N-RD.875

RELEASED
02.05.06 #

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6061 Aluminum Hex Bar 5/16" Wide

\$12.11 Each
89845K74



Material	6061 Aluminum
Cross Section	Hexagon
Shape	Hexagon
Construction	Solid
Appearance	Plain
Width	5/16"
Width Tolerance	-0.006" to 0.006"
Tolerance Rating	Standard
Yield Strength	35,000 psi
Fabrication	Heat Treated
Temper	T6 (Hardened)
Hardness	Brinell 95
Hardness Rating	Soft
Heat Treatable	Yes
Temperature Range	-320° to 300° F
Specifications Met	ASTM B221
Straightness Tolerance	Not Rated
Magnetic Properties	Nonmagnetic
Density	0.1 lbs./cu. in.
Surface Resistivity	25 Ohm-Cir Mil/ft
Melting Point Temperature	1080° F
Modulus of Elasticity	10.0 ksi × 10 ³
Thermal Conductivity	1,390 Btu/hr. × in./sq. ft./°F @ 75° F
Elongation	12.5%
Material Composition	
Aluminum	95.1-98.2%
Chromium	0.4-0.8%
Copper	0.05-0.4%
Iron	0-0.7%
Magnesium	0.8-1.2%
Manganese	0-0.15%

Nickel	0-0.05%
Silicon	0.4-0.8%
Titanium	0-0.15%
Zinc	0-0.25%
Zirconium	0-0.25%
Other	0.15%
Length Tolerance	-1" to 1"
Length	6 ft.
RoHS	Compliant

Often fabricated into vehicle parts, pipe fittings, and containers, 6061 is stronger and offers better corrosion resistance than MIC6 and 2011. It's also nonmagnetic, heat treatable, and resists stress cracking.

Tight-Tolerance Multipurpose O1 Tool Steel Rod

0.5000" Diameter

\$17.22 Each
8893K1



Material	O1 Tool Steel
Cross Section	Round
Shape	Round
Construction	Solid
Appearance	Plain
Diameter	0.5"
Diameter Tolerance	-0.001" to 0.001"
Tolerance Rating	Tight
Yield Strength	50,000 psi
Temper Rating	Softened (Annealed)
Hardness	Rockwell B90
Hardness Rating	Medium
Heat Treatable	Yes
Maximum Hardness after Heat Treatment	Rockwell C65
Mechanical Finish	Precision Ground
Temperature Range	Not Rated
Specifications Met	ASTM A681
Straightness	Not Rated
Tolerance	Not Rated
Density	0.28 lbs./cu. in.
Coefficient of Thermal Expansion	7.1×10^{-6}
Elongation	25%
Material Composition	
Iron	94.79-96.95%
Carbon	0.85-1.05%
Chromium	0.40-0.70%
Manganese	1.00-1.40%
Nitrogen	0.40-0.60%
Phosphorus	0-0.030%
Silicon	0-0.50%
Sulfur	0-0.030%
Tungsten	0.40-0.60%
Vanadium	0-0.30%
Length Tolerance	-1 1/2" to 1 1/2"
Length	6 ft.

Additional	Guidelines for Heat
Specifications	<u>Treating Tool Steel</u>
RoHS	Compliant

These precision-ground rods have a tight diameter tolerance. Commonly used for dies, punches, and gauges, O1 tool steel is an oil-hardening material that resists wear and abrasion.

REV.	DESCRIPTION	DATE	BY	APPROVED
A	NEW ISSUE	17.08.09	VM	WM

SPECIFICATION CONTROL DRAWING

PURCHASE MATERIAL : AISI O1 TOOL STEEL ROUND BAR
 SPECIFICATION: DIN 1.2510 or B.S. BO 1 or
 SAE J437 or SAE J438
 or UNS T31501 or ASTM A681
 PART NUMBER: MT-O1-R [D.DDD]
 WHERE "D.DDD" = DIAMETER IN INCHES
 EG. 5/8" ROUND BAR = MT-O1-R0.625

DART AEROSPACE		<small>Hemelbury, Ontario, Canada</small>	
TITLE AISI O1 TOOL STEEL ROUND BAR			
DWG NO.		REV	
MT-O1-R		A	
DESIGN BY:	VM 8/2/2017	XXX - DSS	FRACTIONS 1/8
DRAWN BY:	VM 08/31/2017	XX ± .01	ANGLES ± 1°
CHECKED:	SAC 08/31/2017	1. DIMENSIONS ARE IN INCHES UNLESS OTHERWISE SPECIFIED	
INFO. APPR:	DP 09/05/2017	2. INTERPRET DIM AND TOL PER ASME Y14.5M-2009	
QA APPR:	PD 09/12/2017	3. DIMENSIONAL LIMITS APPLY UNLESS PLATED	
APPROVED:	WM 09/12/2017	DATE: 8/31/2017 SCALE: NTS WEIGHT: N/A LBS SHEET 1 OF 1	
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EN 17.149

Chantal Lavoie

From: Daniel Paquette
Sent: Tuesday, June 19, 2018 8:49 AM
To: Michelle GagnonDonovan; Chantal Lavoie
Subject: MT-O1-R0.500 Ref; RBT18609-7

Michelle please enter into PLEX. Thanks.

Chantal please order 6 feet of this. Thanks.

DANIEL PAQUETTE

Production Engineering Coordinator

DART AEROSPACE

T 1 613 632-5200 > 236

F 1 613 632-5246

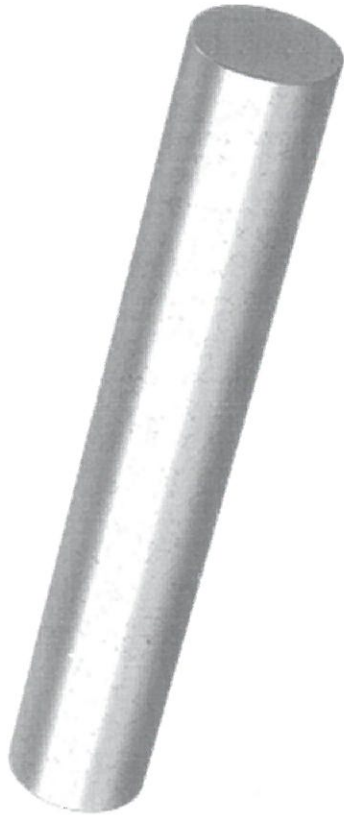
1 800 556- 4166

www.dartaerospace.com



McMASTER-CARR®**Easy-to-Weld 4130 Alloy Steel Rod**
2" Diameter

6673T34



Material	4130 Alloy Steel
Cross Section Shape	Round
Construction	Solid
Appearance	Plain
Diameter	2"
Diameter Tolerance	-0.006" to 0"
Tolerance Rating	Undersized
Yield Strength	Not Rated
Fabrication	Cold Worked, Normalized
Temper Rating	Not Rated
Hardness	Rockwell C20
Hardness Rating	Hard
Heat Treatable	Yes
Maximum Hardness after Heat Treatment	Rockwell C54
Mechanical Finish	Turned and Polished
Temperature Range	Not Rated
Specifications Met	AMS 2301, AMS 6348, ASTM A108
Straightness Tolerance	Not Rated
Density	0.28 lbs./cu. in.
Surface Resistivity	22.3 microhm-cm @ 68° F
Coefficient of Thermal Expansion	7.6×10^{-6}
Elongation	26.5%
Material Composition	
Aluminum	0.039%
Iron	94.53-98.23%
Carbon	0.27-0.34%

Chromium	0.80-1.15%
Copper	0-0.25%
Hydrogen	0-2 ppm Max.
Manganese	0.35-0.60%
Molybdenum	0.15-0.25%
Nickel	0-0.25%
Niobium	0.05% Max.
Phosphorus	0.011-0.035%
Silicon	0.15-0.40%
Sulfur	0.002-0.04%
Titanium	0.03% Max.
Vanadium	0-0.035%
Length	1 ft., 3 ft., 6 ft.
RoHS	Not Compliant

4130 alloy steel has a low carbon content for good weldability. It's often used for gears, fasteners, and structural applications. These rods have been normalized for consistent hardening and machining.



DESIGN #	DRAWN BY #	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
CHECKED UP	APPROVED #	DRAWING NO. M4130N-R	REV. A SHEET 1 OF 1
DATE 02.04.19		TITLE 4130 ROUND BAR	SCALE NTS
A	02.04.19	NEW ISSUE	

PURCHASE MATERIAL:

AISI 4130N ROUND BAR
PER MIL-S-6758 OR AMS 6348/6370/6528

PART NUMBER:

M4130N-R | D.DDD | WHERE D.DDD = DIAMETER IN INCHES
DIA

EG. 7/8" ROUND BAR = M4130N-R0.875

RELEASED
02.05.06 #

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MATERIAL RECEIPT INSPECTION FORM

MATERIAL: M4130NR2.000
 DATE: 19/06/25

PO / BATCH NO.: P0040262/5084011

MATERIAL CERT REC'D: Yes
 QUANTITY RECEIVED: 71"
 QUANTITY INSPECTED: 71"
 QUANTITY REJECTED: 0

THICKNESS ORDERED: 2.00"
 THICKNESS RECEIVED: 2.00"
 SHEET SIZE ORDERED: —
 SHEET SIZE RECEIVED: —

DESCRIPTION	NCR (Check Y/N)		COMMENTS
SURFACE DAMAGE	Y	<u>(N)</u>	
CORRECT FINISH	<u>(Y)</u>	N	
CORROSION	Y	<u>(N)</u>	
CORRECT GRAIN DIRECTION	<u>(Y)</u>	N	
CORRECT MATERIAL PER M-DRAWING	<u>(Y)</u>	N	AMS 6348
CORRECT THICKNESS	<u>(Y)</u>	N	
PHOTO REQUIRED	Y	<u>(N)</u>	
CORRECT REF # TO LINK CERT	<u>(Y)</u>	N	P0040262
CORRECT MATERIAL IDENTIFICATION	<u>(Y)</u>	N	
CORRECT M# ON THE MATERIAL	<u>(Y)</u>	N	
DOES THIS MATERIAL REQUIRE ENGINEERING SIGN OFF	Y	<u>(N)</u>	
DOES THIS REQUIRE AN EXTRUSION REPORT	Y	<u>(N)</u>	

CUT SAMPLE PIECE OF MATERIAL AND PERFORM A HARDNESS CHECK. RECORD RESULTS BELOW					
	HRC	HRB	DUR A	DUR D	WEBSTER
TYPE OF MATERIAL					
SIZE OF TEST SAMPLE					
HARDNESS / DUROMETER READING					

testers located in the Quality Office

QC 18 INSPECTION	ENGINEERING SIGNOFF (if required)
INSPECTED BY: <u>AI</u> DAS 9	SIGNED OFF BY: _____
DATE: <u>19/06/25</u> 9-89	DATE: _____

Attach this inspection sheet with the corresponding material cert and remit to be scanned and received in



6061 Aluminum Hex Bar 5/16" Wide

\$12.11 Each
89845K74



Material	6061 Aluminum
Cross Section Shape	Hexagon
Construction	Solid
Appearance	Plain
Width	5/16"
Width Tolerance	-0.006" to 0.006"
Tolerance Rating	Standard
Yield Strength	35,000 psi
Fabrication	Heat Treated
Temper	T6 (Hardened)
Hardness	Brinell 95
Hardness Rating	Soft
Heat Treatable	Yes
Temperature Range	-320° to 300° F
Specifications Met	ASTM B221
Straightness Tolerance	Not Rated
Magnetic Properties	Nonmagnetic
Density	0.1 lbs./cu. in.
Surface Resistivity	25 Ohm-Cir Mil/ft
Melting Point Temperature	1080° F
Modulus of Elasticity	10.0 ksi × 10 ³
Thermal Conductivity	1,390 Btu/hr. × in./sq. ft.°F @ 75° F
Elongation	12.5%
Material Composition	
Aluminum	95.1-98.2%
Chromium	0.4-0.8%
Copper	0.05-0.4%

Iron	0-0.7%
Magnesium	0.8-1.2%
Manganese	0-0.15%
Nickel	0-0.05%
Silicon	0.4-0.8%
Titanium	0-0.15%
Zinc	0-0.25%
Zirconium	0-0.25%
Other	0.15%
Length Tolerance	-1" to 1"
Length	6 ft.
RoHS	Compliant

Often fabricated into vehicle parts, pipe fittings, and containers, 6061 is stronger and offers better corrosion resistance than MIC6 and 2011. It's also nonmagnetic, heat treatable, and resists stress cracking.

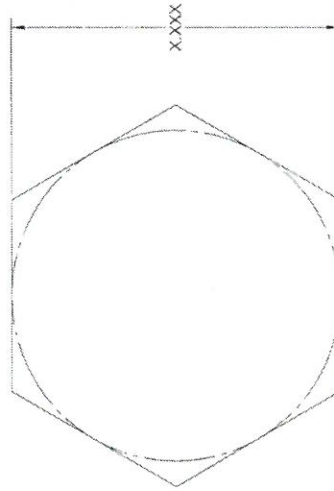
SPECIFICATION CONTROL DRAWING

PURCHASE MATERIAL (6061-T6 T651/T6510/T6511/T62 ALUMINUM HEX BAR

SPECIFICATION: QQ-A-225/B OR AMS-QQ-A-225/B (OR AMS 4117/4128/4115/4116)
OR QQ-A-200/8 OR AMS-QQ-A-200/8 (OR AMS 4160)
OR ASTM B211 OR ASTM B221

PART NUMBER: M6061T6H | X XXX |
HEX
DIA.

WHERE "X XXX" = INSCRIBED DIAMETER OF HEX BAR IN INCHES
EG 0.5" HEX BAR = M6061T6H0.500



RELEASED
2009-09-09

B	REFORMAT DMG, ACD B211 & B221 SPEC (ZN D6-1), REF PAR 08-020A	CP	09 07 13
A	NEW ISSUE	KJ	04 08 20
REV	DESCRIPTION	BY	DATE
DESIGN	DART AEROSPACE LTD		
DRAWN	HAYKESBURY ONTARIO, CANADA		
CHECKED	DRAWING NO		REV B
MFG. APPR.	M6061T6H		SHEET 1 OF 1
APPROVED	TITLE		SCALE
DE APPR.	6061-T6 HEX BAR		NTS
DATE	09.07.13		

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MATERIAL RECEIPT INSPECTION FORM

MATERIAL: M6061 T6 H0.312

PO / BATCH NO.: P0040262 / 8084012

DATE: 18/06/25

MATERIAL CERT REC'D: Yes

THICKNESS ORDERED: 0.312"

QUANTITY RECEIVED: 12ft

THICKNESS RECEIVED: 0.312"

QUANTITY INSPECTED: 12ft

SHEET SIZE ORDERED: —

QUANTITY REJECTED: 0

SHEET SIZE RECEIVED: —

DESCRIPTION	NCR (Check Y/N)	COMMENTS
SURFACE DAMAGE	Y <u>(N)</u>	
CORRECT FINISH	<u>(Y)</u> N	
CORROSION	Y <u>(N)</u>	
CORRECT GRAIN DIRECTION	<u>(Y)</u> N	
CORRECT MATERIAL PER M-DRAWING	<u>(Y)</u> N	ASTM B221
CORRECT THICKNESS	<u>(Y)</u> N	
PHOTO REQUIRED	Y <u>(N)</u>	
CORRECT REF # TO LINK CERT	<u>(Y)</u> N	P0040262
CORRECT MATERIAL IDENTIFICATION	<u>(Y)</u> N	
CORRECT M# ON THE MATERIAL	<u>(Y)</u> N	
DOES THIS MATERIAL REQUIRE ENGINEERING SIGN OFF	Y <u>(N)</u>	
DOES THIS REQUIRE AN EXTRUSION REPORT	Y <u>(N)</u>	

CUT SAMPLE PIECE OF MATERIAL AND PERFORM A HARDNESS CHECK. RECORD RESULTS BELOW					
	HRC	HRB	DUR A	DUR D	WEBSTER
TYPE OF MATERIAL					
SIZE OF TEST SAMPLE					
HARDNESS / DUROMETER READING					

testers located in the Quality Office

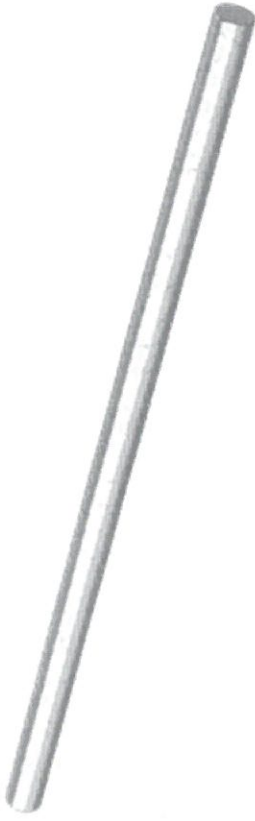
QC 18 INSPECTION	ENGINEERING SIGNOFF (if required)
INSPECTED BY: <u>AT</u> DAS DATE: <u>18/06/25</u> 9-89	SIGNED OFF BY: _____ DATE: _____

Attach this inspection sheet with the corresponding material cert and remit to be scanned and received in



Tight-Tolerance Multipurpose O1 Tool Steel Rod
0.5000" Diameter

\$17.22 Each
8893K1



Material	O1 Tool Steel
Cross Section Shape	Round
Construction	Solid
Appearance	Plain
Diameter	0.5"
Diameter Tolerance	-0.001" to 0.001"
Tolerance Rating	Tight
Yield Strength	50,000 psi
Temper Rating	Softened (Annealed)
Hardness	Rockwell B90
Hardness Rating	Medium
Heat Treatable	Yes
Maximum Hardness after Heat Treatment	Rockwell C65
Mechanical Finish	Precision Ground
Temperature Range	Not Rated
Specifications Met	ASTM A681
Straightness Tolerance	Not Rated
Density	0.28 lbs./cu. in.
Coefficient of Thermal Expansion	7.1×10^{-6}
Elongation	25%
Material Composition	
Iron	94.79-96.95%
Carbon	0.85-1.05%
Chromium	0.40-0.70%
Manganese	1.00-1.40%
Nitrogen	0.40-0.60%

Phosphorus	0-0.030%
Silicon	0-0.50%
Sulfur	0-0.030%
Tungsten	0.40-0.60%
Vanadium	0-0.30%
Length Tolerance	-1 1/2" to 1 1/2"
Length	6 ft.
Additional Specifications	Guidelines for Heat Treating Tool Steel
RoHS	Compliant

These precision-ground rods have a tight diameter tolerance. Commonly used for dies, punches, and gauges, O1 tool steel is an oil-hardening material that resists wear and abrasion.

SPECIFICATION CONTROL DRAWING

PURCHASE MATERIAL : AISI O1 TOOL STEEL ROUND BAR

SPECIFICATION: DIN 1.2510 or B.S. BO 1 or
SAE J437 or SAE J438
or UNS T31501 or ASTM A681

PART NUMBER: MT-O1-R [D.DDD]
WHERE "D.DDD" = DIAMETER IN INCHES
EG. 5/8" ROUND BAR = MT-O1-R0.625

REV.	DESCRIPTION	DATE	BY	APPROVED
A	NEW ISSUE	17.08.09	VM	WM

DART AEROSPACE		100% HISTORY CONTROL CAPABLE	
TITLE AISI O1 TOOL STEEL ROUND BAR			
Dwg No.		REV	
DESIGN BY: VM 08/2017		MT-O1-R	
DRAWN BY: VM 08/31/2017		A	
CHECKED BY: SAC 08/31/2017		1. SURFACES TO BE FINISHED	
MFG BY: VM 08/31/2017		2. UNLESS OTHERWISE SPECIFIED	
APPROVED BY: VM 08/31/2017		3. INTERPRETATION AND TOL PER	
DATE: 8/31/2017		SCALE: NTS WEIGHT N/A	
SHEET 1 OF 1		1. DIMENSIONAL LIMITS APPLY	
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THIS DOCUMENT IS PROVIDED AS A GUIDE ONLY AND IS NOT TO BE USED FOR CONSTRUCTION OF A PART WITHOUT THE DART AEROSPACE LTD. APPROVAL.			

EN 17-149

MATERIAL RECEIPT INSPECTION FORM

MATERIAL: M7-01-R0.500
 DATE: 18/06/25

PO / BATCH NO.: P0040262/5084013

MATERIAL CERT REC'D: Yes
 QUANTITY RECEIVED: 12ft
 QUANTITY INSPECTED: 12ft
 QUANTITY REJECTED: 0

THICKNESS ORDERED: 0.500"
 THICKNESS RECEIVED: 0.500"
 SHEET SIZE ORDERED: —
 SHEET SIZE RECEIVED: —

DESCRIPTION	NCR (Check Y/N)	COMMENTS
SURFACE DAMAGE	Y <input checked="" type="radio"/> N	
CORRECT FINISH	Y <input checked="" type="radio"/> N	
CORROSION	Y <input checked="" type="radio"/> N	
CORRECT GRAIN DIRECTION	Y <input checked="" type="radio"/> N	
CORRECT MATERIAL PER M-DRAWING	Y <input checked="" type="radio"/> N	ASTM A681
CORRECT THICKNESS	Y <input checked="" type="radio"/> N	
PHOTO REQUIRED	Y <input checked="" type="radio"/> N	
CORRECT REF # TO LINK CERT	Y <input checked="" type="radio"/> N	P0040262
CORRECT MATERIAL IDENTIFICATION	Y <input checked="" type="radio"/> N	
CORRECT M# ON THE MATERIAL	Y <input checked="" type="radio"/> N	
DOES THIS MATERIAL REQUIRE ENGINEERING SIGN OFF	Y <input checked="" type="radio"/> N	
DOES THIS REQUIRE AN EXTRUSION REPORT	Y <input checked="" type="radio"/> N	

CUT SAMPLE PIECE OF MATERIAL AND PERFORM A HARDNESS CHECK. RECORD RESULTS BELOW					
	HRC	HRB	DUR A	DUR D	WEBSTER
TYPE OF MATERIAL					
SIZE OF TEST SAMPLE					
HARDNESS / DUROMETER READING					

testers located in the Quality Office

QC 18 INSPECTION	ENGINEERING SIGNOFF (if required)
INSPECTED BY: <u>AT</u> DAS 8 9-89	SIGNED OFF BY: _____
DATE: <u>18/06/25</u>	DATE: _____

Attach this inspection sheet with the corresponding material cert and remit to be scanned and received in

Cast Nylon Bar, 4" Wide, 3" Thick

In stock
\$94.00 per ft.
8733K243



Cast Nylon Bar, 4" Wide, 3" Thick | McMaster-Carr

Material	Nylon Plastic
Grade	6
Fabrication	Cast
Cross Section Shape	Rectangle
Construction	Solid
Texture	Smooth
Color	Off-White
Clarity	Opaque
Thickness	3"
Thickness Tolerance	0" to +0.025"
Tolerance Rating	Oversized
Width	4"
Width Tolerance	0" to +1/4"
Length	1 ft., 2 ft.
Backing Type	Plain
Hardness	Rockwell R100
Hardness Rating	Hard
For Use Outdoors	No
Temperature Range	-20° to 200° F
Impact Strength	0.40 ft.-lbs./in.
Impact Strength Rating	Poor
Tensile Strength	10,000 psi
Tensile Strength Rating	Excellent
Specifications Met	3-A Certified, ASTM D5989, Made of FDA Listed Material, UL 94HB
Density	0.042 lbs./cu. in.
Coefficient of Friction	0.22

Dielectric Strength	500V/mil
Water Absorption	0.60%
Coefficient of Thermal Expansion	5 x 10 ⁻⁵ in./in./°F
RoHS	Compliant

Use these cast nylon 6 sheets and bars for gears, sprockets, and wear strips. They're lightweight, stiff, and easier to machine than other types of nylon. They have a slippery surface and are an excellent insulator. This material is comparable to Nylatron and Nycast.

MATERIAL RECEIPT INSPECTION FORM

MATERIAL: MT-NYLON 6-83 000x4.000-W
 DATE: 18/06/25

PO / BATCH NO.: P0040262/5084055

MATERIAL CERT REC'D: Yes
 QUANTITY RECEIVED: 2ft
 QUANTITY INSPECTED: 2ft
 QUANTITY REJECTED: 0

THICKNESS ORDERED: 3"
 THICKNESS RECEIVED: 3"
 SHEET SIZE ORDERED: —
 SHEET SIZE RECEIVED: —

DESCRIPTION	NCR (Check Y/N)		COMMENTS
SURFACE DAMAGE	Y	<u>(N)</u>	
CORRECT FINISH	<u>(Y)</u>	N	
CORROSION	Y	<u>(N)</u>	
CORRECT GRAIN DIRECTION	<u>(Y)</u>	N	
CORRECT MATERIAL PER M-DRAWING	<u>(Y)</u>	N	<u>ASTM D5989</u>
CORRECT THICKNESS	<u>(Y)</u>	N	
PHOTO REQUIRED	Y	<u>(N)</u>	
CORRECT REF # TO LINK CERT	<u>(Y)</u>	N	<u>P0040262</u>
CORRECT MATERIAL IDENTIFICATION	<u>(Y)</u>	N	
CORRECT M# ON THE MATERIAL	<u>(Y)</u>	N	
DOES THIS MATERIAL REQUIRE ENGINEERING SIGN OFF	Y	<u>(N)</u>	
DOES THIS REQUIRE AN EXTRUSION REPORT	Y	<u>(N)</u>	

CUT SAMPLE PIECE OF MATERIAL AND PREFORM A HARDNESS CHECK. RECORD RESULTS BELOW					
	HRC	HRB	DUR A	DUR D	WEBSTER
TYPE OF MATERIAL					
SIZE OF TEST SAMPLE					
HARDNESS / DUROMETER READING					

testers located in the Quality Office

QC 18 INSPECTION		ENGINEERING SIGNOFF (if required)	
INSPECTED BY: <u>AK</u> <small>DAS</small>	SIGNED OFF BY: _____		
DATE: <u>18/06/25</u> <small>+89</small>	DATE: _____		

Attach this inspection sheet with the corresponding material cert and remit to be scanned and received in